What is claimed is:

1.   A method of sharing data for a computer system having a first computer, a second computer, a plurality of memory units and a control unit for controlling the plurality of memory units, wherein a data storage subsystem for connection to the first and second computers is provided, the method comprising:

forming a paired state in which contents of a first memory unit and a second memory unit are maintained the same as the first memory unit stores data used by the first computer;

dissolving the paired state between the first memory unit and the second memory unit, and not allowing updating of the first memory unit to be reflected in the second memory unit;

re-mapping a third memory unit used by the second computer, and the second memory unit with each other; and

controlling any access by the second computer to the third memory unit to instead be made to the second memory unit.

2.   A method of sharing data as in claim 1 further comprising, after the step of re-mapping, a step of forming a paired state of the first memory unit and the third memory unit.

3.   A method of sharing data as in claim 1 wherein the data storage subsystem consists of a first data storage system having the first memory unit, and connected to the first computer, and a second data storage subsystem having the second memory unit and the third memory unit, and connected to the second computer, and wherein the first computer and the first data storage subsystem are geographically separated from the second data storage subsystem.

4.   A method of sharing data as in claim 2 wherein the data storage subsystem consists of a first data storage system having the first memory unit, and connected to the first computer, and a second data storage subsystem having the second memory unit and the third memory unit, and connected to the second computer, and wherein the first computer and the first data storage subsystem are geographically separated from the second data storage subsystem.

5.   A method of sharing data for a computer system having a first
computer, a second computer, a plurality of memory units and a control unit for
controlling the plurality of memory units, and including a data storage subsystem for
connection to the first computer and the second computer, the method comprising:

forming a paired state in which contents of a first memory unit and
contents of a second memory unit are controlled to correspond to each other as the first
memory unit stores data used by the first computer;

dissolving the paired state between the first memory unit and the second
memory unit, so as not to allow updating of the first memory unit to be reflected in the
second memory unit;

copying the contents of the second memory unit to a third memory unit;

re-mapping a fourth memory unit used by the second computer and the
third memory unit with each other; and

controlling any access by the second computer to the fourth memory unit
to instead be made to the third memory unit.

6.   A method of sharing data as in claim 5 wherein the step of copying
the contents of the second memory unit to the third memory unit includes a step of
converting a first data format stored in the second memory unit for use by the first
computer into a second data format for use by the second computer.

7.   A method of sharing data as in claim 6 wherein the step of
converting data from the first data format to the second data format is based on interfaces
among the first computer, the second computer and the data storage subsystem.

8.   A method of sharing data as in claim 7 wherein the step of
converting data comprises converting data between a count key data format and a fixed-
length block format.

9.   A method of sharing data as in claim 5 wherein at least one of the
first through fourth memory units is a logical memory unit recognized by at least one of
the first or second computer as a memory unit.

10.   A method of sharing data as in claim 5 wherein the step of copying
is performed using a third computer separate from the first and the second computers.

1   11.   A method of sharing data as in claim 5 wherein the data storage

2   subsystem consists of a first data storage subsystem having the first memory unit and

3   connected to the first computer, and a second data storage subsystem having the second,

4   the third, and the fourth memory units connected to the second computer, and wherein the

5   first computer and the first data storage subsystem are geographically separate from the

6   second computer and the second data storage subsystem.

1   12.   A method of sharing data for a computer system having a first

2   computer, a second computer, a plurality of memory units and a control unit for

3   controlling the plurality of memory units, wherein a data storage subsystem for

4   connection to the first and second computers are provided, the method comprising:

5   storing a copy of data in the first memory unit as of a certain time in a

6   second memory unit;

7   recording, in response to changes in the data in the first memory, the

8   changed contents in a third memory unit;

9   updating the contents of a second memory unit on the basis of the changed

10   contents recorded in the third memory unit;

11   connecting the second memory unit to the second computer; and

12   causing the second computer to direct its data access to the second

13   memory unit.

1   13.   A method of sharing data as in claim 12, wherein the step of

2   connecting the second memory unit to the second computer further comprises a step of re-

3   mapping a fourth memory unit and the second memory unit connected the second

4   computer.

1   14.   A computer system, comprising:

2   a first computer;

3   a second computer; and

4   a data storage subsystem connected to the first and the second computer,

5   the data storage subsystem including:

6   at least three memory units,

7   a control unit for writing data written from the first computer to a first

8   memory unit into a second memory unit in duplication and for replacing the second

9   memory unit with a third memory unit when the second unit is accessed by the second

10   computer.

1   15.   A computer system as in claim 14 wherein the first, the second and

2   the third memory units each comprise logical memory units formed in a physical memory

3   unit of the data storage subsystem.

1   16.   A computer system comprising:

2   a data storage subsystem having a plurality of interfaces and a memory

3   unit in which a plurality of logical volumes are formed;

4   a first computer for accessing the data storage subsystem in accordance

5   with count key data format; and

6   second and third computers for accessing the data storage subsystem in

7   accordance with a fixed-length block format, wherein:

8   the data storage subsystem writes, into a second logical volume, a

9   duplicate of data written from the first computer to a first logical volume;

10   the second computer reads the second logical volume in a count key data

11   format and writes to a third logical volume, and the third computer replaces the third

12   logical volume with a fourth logical volume to which it accesses.

1   17.   A data storage subsystem connected to at least one computer, the

2   data storage subsystem comprising:

3   a plurality of volumes accessed from the at least one computer; and

4   a means to replace instructions from the at least one computer to a logical

5   volume with another logical volume.